



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/924,293	08/08/2001	Iwao Tahara	01470/LH	3121

1933 7590 11/18/2002
FRISHAUF, HOLTZ, GOODMAN & CHICK, PC
767 THIRD AVENUE
25TH FLOOR
NEW YORK, NY 10017-2023

EXAMINER

TOLEDO, FERNANDO L

ART UNIT PAPER NUMBER

2823

DATE MAILED: 11/18/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/924,293

Applicant(s)

TAHARA ET AL.

Examiner

Fernando Toledo

Art Unit

2823

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2,3&5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

3. Claims 1 – 6, 9 – 19 and 22 – 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Roy (U. S. patent 6,180,976 B1).
4. In re claims 1, 13 and 14, Roy in the U. S. patent 6,180,976 B1; figures 1 – 17 and related text, preparing a semiconductor wafer substrate including several chip forming regions each having a circuit element-forming region and several connection pads (column 6, lines 20 – 52); forming an insulating film 26 on the circuit element-forming region of each of the chip forming regions; forming at least one thin film passive element (400) including at least one conductive layer (404) on the insulating film; forming a columnar electrode electrically connected to at least one of the several connection pads (figure 12); dividing the semiconductor wafer substrate into individual

chip forming regions so as to form several semiconductor devices each having at least on thin film passive element (column 6, lines 1 – 20).

5. In re claims 2 and 15, Roy discloses wherein the forming of the thin film passive element includes forming at least one capacitance element (see title of reference).

6. In re claims 3 and 16; Roy discloses wherein the forming of the capacitance element includes: forming a first conductive layer (404) on the circuit element-forming region of the semiconductor substrate with an insulating film interposed therebetween; forming a dielectric material layer (figure 12) on the first conductive layer; forming a second conductive layer (402) on the dielectric layer.

7. In re claims 4 and 17; Roy discloses wherein the forming of the capacitance element includes: forming to pieces of conductive layer positioned adjacent to each other a predetermined distance apart from each other on the insulating film; and forming a dielectric material layer in the clearance between adjacent two pieces of the conductive layer (figure 12).

8. In re claims 5 and 18; Roy discloses wherein the forming of the capacitance element includes: forming two pieces of the conductive layer positioned adjacent to each other a predetermined distance apart from each other on the insulating film; forming a plate-like electrode on each of the two adjacent pieces of the conductive layer; and forming a dielectric material layer in the clearance between one end and the other end of the plate-like electrodes (figure 12).

9. In re claims 6 and 19; Roy discloses wherein the forming of the thin film passive element includes forming at least one inductance element (column 12, lines 14 – 18).

Art Unit: 2823

10. In re claims 9 and 23; Roy teaches wherein the forming of the thin film passive element includes forming the columnar electrode in at least one of the electrode terminals at one end and the other end of the thin film passive element (figure 12).

11. In re claims 10 and 24; Roy teaches wherein the forming of the thin film passive element includes connecting at least on of the electrode terminals at one end and the other end of the thin film passive element to the connection pad (figure 12).

12. In re claims 11 and 25; Roy shows wherein the forming of the thing film passive element includes connecting each electrode terminal of the thin film passive element to at least one of the connection pad and the columnar electrode (figure 12).

13. In re claims 12 and 22; Roy further discloses wherein the forming of the thin film passive element includes covering the periphery of the thin film passive element with a protective film (figure 12).

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 7 and 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Roy in view of Yamazaki (U. S. patent 6,002,161).

16. Roy discloses forming an inductor, however, Roy does not disclose wherein the forming of the inductance element includes patterning the conductive layer in any of the

shapes selected from the group consisting of an angular eddy shape, a rectangular waver shape and a loop shape.

17. However, Yamazaki in the U. S. patent 6,002,161; figures 1 – 15 teaches that the inductance of the inductor element varies depending upon outer dimensions, turn number and wiring width and wiring distance (column 1, lines 29 – 34).

18. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to form the inductance element of Roy by patterning the conductive layer in any of the shapes selected from the group consisting of an angular eddy shape, a rectangular waver shape and a loop shape, since as taught by Yamazaki, the inductance of the inductor element varies depending upon outer dimensions, turn number and wiring width and wiring distance.

19. Claims 8 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roy in view of Yamazaki as applied to claims 7 and 21 above, and further in view of Yamazaki et al. (U. S. patent 6,331,722 B1).

20. Roy in view of Yamazaki does not show wherein the inductance element includes forming a magnetic film on the conductive layer.

21. However, Yamazaki et al. in the U. S. patent 6,331,722 B1 discloses that inductors can be formed by using magnetic material as it is well known in the art (column 2, lines 45 – 55).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the inductor of Roy in view of Yamazaki with a magnetic material since as taught by Yamazaki et al. it is well known in the art to form inductance

Art Unit: 2823

elements with a magnetic material, also, it has been held to be within the general skill of a worker in the art to select a known material on the base of its suitability, for its intended use involves only ordinary skill in the art. In re Leshin, 125 USPQ 416.

Conclusion


22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fernando Toledo whose telephone number is 703-305-0567. The examiner can normally be reached on Mon-Fri 8am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Olik Chaudhuri can be reached on 703-306-2794. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7382 for regular communications and 703-308-7382 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Fernando Toledo
Examiner
Art Unit 2823

ft
October 31, 2002


Olik Chaudhuri
Supervisory Patent Examiner
Technology Center 2800